

Agrarian Reform, Output Growth, Wages and Employment in U. P.'s Agriculture

G. P. MISHRA

GIDS Library

40678



1333.31 MIS

I

133-31
MIS

GIRI INSTITUTE OF DEVELOPMENT STUDIES

Sector 'O', Aliganj Housing Scheme, Lucknow-226 020

AGRARIAN REFORM, OUTPUT GROWTH, WAGES AND
EMPLOYMENT IN U.P.'S AGRICULTURE

G.P. Mishra

".....no radical improvement in the condition of the peasantry is possible without the abolition of the zamindari system. But we must take care, while eliminating one set of vested interests, not to create another set which might prove equally hostile to our ultimate goal, viz, social ownership of the land and its produce". Note by Sampurnanand, to Congress Agrarian Enquiry Committee Report, 1936 (United provinces).

Land reform was one of the major items of discussion on the policy agenda of planning for development in rural India till the mid-seventies. During this period there were a number of studies brought out by the government agencies and scholars on the ideological content, perspectives, impact, and success and failure of land reform measures and programmes in the context of rural India. The studies were conducted and brought out in response to policy measures and programmes that appeared on the policy agenda and documents of planning for rural development.

Paper presented for discussion at the meeting of study Group on 'Land Reform and Rural Poor', held under the auspices of National Commission on Rural Labour, during 12-14 December, 1989, in Bangalore.

Since the mid-seventies the question of land reform hardly occupied the place of its specificity and seriousness in the policy documents of planning for rural development, despite having some pages devoted to it. In fact, the land reform question was relegated to the background because of the success story of the new farm technology in overcoming the burden of India's food problem by the end of the mid-seventies.

The adoption and spurt of the technological breakthrough since the mid-sixties thus created an impression that given the restructured pattern of land relations, the new farm technology-based strategy of rural development could raise not only output and employment but also eradicate poverty in rural India. That is why the question of making marginal and small farms viable was taken into consideration in the form of differential strategy of rural development.

The new farm strategy of development raised agricultural output and income in many folds but accompanied by a process of unequal output and income growth in Indian agriculture. The number of rural poor went an increasing in rural India. The employment elasticity of output (i.e., percentage increase in employment caused by percentage increase in output) declined from 0.50 observed in the seventies to 0.23 in the eighties. The proportion of casual labourers to total agricultural labourers also shows an increasing trend which indicates growth in the under-employment of work-force in agriculture.

Significantly perceptible increase in the share of non-agricultural income to total income but accompanied by some marginal increase in the proportion of non-agricultural workers to total workers (or marginal decline in the proportion of agricultural workers) since 1951 to 1981 shows the continued preponderence of agriculture in terms of agricultural dependency of a majority of work force in Indian agriculture.

The post-land reform situation wherein million peasants were brought into direct contact with the state by abolishing zamindari system and intermediaries, by reducing the magnitude of tenancy, by acquiring and distributing some surplus land among the landless through the imposition of ceilings on land and by consolidating land holding for the improvement of land for cultivation, still show the existence of monopolistic control over the supply of scarce land by some handful number of farmers belonging to the large farm sector in rural India. Given this inequitarian distribution of land ownership, the spurt of new technology coupled with modern inputs actuated the process of uneven growth in output, income and asset formation in the rural sector in the Indian economy. The expectation that the expansion of non-agricultural sector would absorb surplus farm labour, was belied. The new technology along with output growth could not raise the rate of labour absorption in agriculture as per expectation.

All these situations demand for some freshing thinking on the question of land reform in rural India. It is also needed because the existing pattern of land relations does not seem to be conducive to the adoption of the new farm technology by the farmers of all categories in agriculture. That is why semi-feudal or lumpen capitalist production relations still exist in many parts of rural India. Land reform policy requires a fresh look with a view to changing the existing land relations in a manner to facilitate the process of change in the semi-feudal or lumpen capitalist production relations which act as a pull-back force in the process of rural development. The existence of such relations in production also restricts the expansion of productive wage employment of agricultural labour in particular, as a result of which real agricultural wages do not increase in proportion to growth in agricultural output nor the wages share shows any increasing trend.

The purpose of this paper is to examine the pattern of change in land relations as a proxy for the impact of land reform policy in Uttar Pradesh. Given the pattern of change in land relations, an attempt is also made to analyse the relationships between output-raising effects of technological change on wages and employment in U.P.'s agriculture. The relationships are examined on the assumptions that (a) output growth being a function of increase in productivity

(i.e., yield) per hectare depends on the level of technological change in agriculture; and (b) agricultural, wages and employment depend on the level of output-raising technological change in U.P.'s agriculture. It is also contended here that technological change alone cannot raise output, wages and employment in the absence of appropriate production relations. Hence the relations of production are also analysed in the context of U.P.'s agriculture. All this is based on data collected from the 1000 sample households scattered over in 20 villages belonging to five districts of the state, i.e., Gorakhpur in East U.P., Muzaffarnagar in West U.P., Rae Bareli in Central U.P., Hamirpur in Bundelkhand region and Nainital in Hill tarai area of the State.

Perspectives of Agrarian Reform

The colonial juridical structure or form of agrarian relations in land was most inimical to the process of development and growth in U.P.'s agriculture (or for what matter in Indian agriculture as a whole). In his pioneering study dealing with agricultural development and growth, covering a period of fifty years till 1949-50, Shrimali observes "The period of British rule was one marked by overall stagnation or deterioration in the agricultural economy of the state. This was mainly because of the general approach and policies pursued by the alien British

ulers towards the problems of development generally and of the agricultural sector particularly. These policies were essentially one of buttressing the feudal agrarian relations in the rural sector with a view to having a social base in the countryside among the class of land owners and retarding development so that the country would be retained by them as a colonial appendage of the British economy".¹ The land settlements introduced by the colonial rulers after the sepoyi mutiny installed the Talukdari-cum-Zamindari system in the state and a strong social base of the state control in the countrysides was brought into the bureaucratic fold of the colonial rule in the sense of having bureaucratic control over the Talukdars and Zamindars and the peasantry by the feudal lords in the rural areas of the state. Such arrangements were not only repressive and exploitative but also retrogressive and eroding in character. The super-imposed colonial feudal arrangements shattered the socio-economic base of the rural economy leading to massive poverty and unemployment among the peasantry and rural people which was grown and developed spontaneously over a long period of time. The 49th session of the Indian National Congress held at Lucknow stated in its resolution on the agrarian question that "the most important and urgent problem of the country is the appalling poverty, unemployment and indebtedness of the peasantry due to the antiquated and repressive land tenure and revenue system and intensified in recent years

by the great slump in the prices of agricultural produce".²

The Congress Agrarian Sub-Committee, U.P. (1936) stated that "....the conditions in the U.P. are in many respects far worse than those prevailing in other parts of the country".³ Therefore, the final solution of the problem of poverty and unemployment of the peasantry, as per the Committee Report, involved "the removal of the British imperialistic exploitation, a thorough change of land tenure and revenue systems and recognition by the state of its duty to provide work for rural and unemployed masses".⁴

In post-independence India, specially during the first phase of planning, the question of agrarian reconstruction or restructuring was taken the foremost task for accomplishment with a view to making land tenurial relations conducive to agricultural development and growth. In Uttar Pradesh, late Pt. Govind Ballabh, the first Chief Minister of the state, played leading role in the agrarian reconstruction of land relations in the state. Under his leadership, the historic Zamindari Abolition and Reform Act, 1950 came into existence and subsequently followed and supplemented by similar laws such as the Rampur, Thekadari and Pattadari Act, 1953, the Kumaon Land Act, 1954, etc. As a result, the colonial structure of agrarian land relations was eroded by establishing direct relations between the state and peasants in the state. "The cultivations were granted

permanent and hereditary rights in land for the first time. The burden of illegal feudal exactions like Nazrana, and coercive forms of feudal exploitation, such as Hari (tenants being required to plough the landlord's land with their bullocks) and Begar (variety of labour required to be performed for the landlord without wages) were eliminated.⁵ The state government under the leadership of Pt. Pant paved the way for the change in agrarian land relations in the state which led to self-resumption of cultivation and to encourage the peasants for developing their land and farming. The agrarian land relations restructured through land tenancy reforms so far were not enough to encourage agricultural development for realising sustained rate of growth in the state economy. Hence in subsequent phases of planning, other than the land reform measures, such as the area - specific agricultural development programmes (popularly known as IADP) and the crop - specific New Farm technology coupled with liberal credit policy and required institutions like marketing co-operatives to facilitate the purchase and use of new technologies and practices were launched and introduced by the Government in the state. The rationale behind launching all these programmes was to develop the forces of production and to create conditions for their social inter-course in the process of farm production in order to raise output, to generate employment opportunities for wage

labour and to reduce rural poverty correspondingly.

So far the level of development in the productive forces of agriculture (such as extent of irrigation, area under HYV, fertilizer consumption, use of modern agricultural implements and machinery, etc.) is concerned, our study⁶ shows U.P. as one of the states in the most agriculturally developed group of Indian agriculture. But in terms of agricultural growth, it does not appear to be so. There are a number of studies, such as, by Sheila Bhalla⁷ and Mishra⁸ which do not present an encouraging picture about employment and wages in U.P.'s agriculture. Hardly some significant decline is observed in the incidence of rural poverty in the state based on NSS consumer expenditure data. Even that case, the magnitude of rural poverty is not small and not without challenge to the development process of planning in the state.

Moreover, given the restructured agrarian land relations neither the development of agriculture is spatially uniform nor the rate of growth in agricultural output in the state. The existence of spatial variations in the level of development and output growth may be attributed to this fact that given the pattern of land relations, the emerging relations of production in the post - land reform and Green Revolution era are not uniformly grown in the agricultural economy of the state.

Pattern of Land Relations

The state agrarian reconstruction policies and programmes changed the super-imposed colonial setting of feudal land relations into the pattern of peasant proprietaryship in Uttar Pradesh. But the major objective of the state policy for agrarian reconstruction was to break up the concentration of land ownership which remained far from the reality. Baljit Singh in this study conducted early in 1956, made the observation that "abolition of Zamindari has brought almost no change in the pattern of land distribution".⁹ In a subsequent study undertaken by Baljit Singh and Shridhar Misra indicated that "the Zamindari abolition has made little improvement in this respect and land continued to be distributed among the cultivators as inequitably as before".¹⁰ According to Shrimali's study undertaken in 1976-77, "when the pattern of land holding, whether owner or operated, is compared to that in pre-Zamindari abolition period, growth in concentration is revealed".¹¹ All these studies indicate no change in the pattern of land distribution but on the contrary, they show the persistence of monopolistic element in the pattern of distribution.

Table 1, presenting some of the basic structural characteristics of agrarian change in U.P., indicate not only the existence of a high degree of inequality in owned area among rural households but also its persistence since

1953-54 to 1982. The proportion of the total households as landless declined from 9.36 per cent in 1953-54 to about 5 per cent in 1982 (having some marginal increase in 1982 over 1971-72). But the proportion of the total households without land and some land (i.e., upto 0.49 acre) remained not only as high as 31 per cent in 1953-54 but also went upto about 36 per cent in 1982, despite having about 2 per cent decline in 1982 over 1971-72. If the proportion of the total households owning land upto one hectare is taken into account, the same table shows an increasing proportional trend in the number of households with owning land of upto one hectare from 1953-54 to 1982 in the state. The rate of increase in the proportion of households with holding size of upto one acre had been much higher than the rate of increase in owned area by them during 1953-54 to 1982 in the state. All this leaves no doubt on the existence and persistence of concentration of land in the rural areas of the state.

The rural areas of the state also aggregatively show the existence of tenancy in terms of households leasing out and leasing in land and the area leased-out and leased-in. While the proportion of households leasing out land increased since 1953-54 to 1982, the proportion of owned area leased-out went down during this period. It stands to be about 5 per cent of the total owned area. There was some decline in the proportion of households leasing-in land

during 1953-54 to 1982 but the proportion of operated area leased-in remained more or less the same at little more than 11 per cent during the same period in the state. This is all about the pattern of change in land relations at the aggregative level in the state. Let us see this on the basis of our sample data relating to five districts of the state.

The pattern of land distribution is also skewed in the sample districts of Muzaffarnagar, Gorakhpur, Hamirpur and Rae Bareli. As evident from Table 2, the Gini ratios of owned and sown area with the households are more than 0.5 in Muzaffarnagar, Gorakhpur and Hamirpur, but in the case of Nainital and Rae Bareli wherein the ratios of owned and sown area are more than 0.41. It is also evident from Table 2 that the households in the farm size group of 10 acres and above own some higher percentage of land in these five districts.

The proportion of the total households as landless varied from 5.05 per cent in Nainital to about 41 per cent in Muzaffarnagar. The marginal and small farm households appeared to constitute a major part of the sample households in these districts. The cases of leasing-out and leasing-in are also interesting to note in these districts. In Hamirpur, 8 per cent of the total households leased-out a little more 17 per cent of the total owned area. In the same district, 20 per cent of the households also reported

to have cultivated leased-in as 15.29 per cent of the total sown area. Rae Bareli and Gorakhpur are next to Hamirpur in this regard. In the former district, 13 per cent of the households leased-out 7.25 per cent of the total owned area and 18 per cent of them cultivated leased-in area in the order of 10.20 per cent of the total sown area. The case of leasing-out area was numerically not significant in Gorakhpur as 3 per cent of the total households has cultivated some leased-out area and 20 per cent of them had 8 per cent leased-in area of the total sown area. In Muzaffarnagar, the case of leasing-out and leasing-in was virtually negligible. In Nainital, only a few households leased-out land which was 2.13 per cent of the total owned area. Similarly, the leased-in area which was cultivated by 6 per cent of the households was found to be 0.87 per cent of the sown area in the district. All this shows the prevalence of tenancy in all the districts, but more revealing in the districts of Hamirpur, Gorakhpur and Rae Bareli. Rae Bareli following in the group of high irrigated area had 9.35 per cent of the total owned area not under cultivation. The case of area not under cultivation was also prevalent in Hamirpur as it constituted about 3 per cent of the total owned area in the district. Some negligible area was also found to be not under cultivation in Nainital. However, it was not found in Muzaffarnagar.

The above pattern of land distribution and tenancy as obtained from field survey marks some difference from what the secondary data based state level analysis shows. However, the primary data based analysis of land relations shows the existence of inequality in land distribution and of tenancy in the rural areas.

Output Growth, Wages and Employment

The objective of agrarian reform as a package of land and tenancy reform and measures was not to realise social ownership of land and its produce by dismantling the colonial edifice of feudal relations in land. As a result, the pattern of land distribution remained inequitable and a new face of agrarian reform in terms of New Farm strategies of differential character appeared in the state of Uttar Pradesh or for that matter in the whole of rural India since the mid-sixties. The main objective of the new farm strategies was to create and develop new forces of production with appropriate institutions to bring about their social intercourse in the process of farm production in agriculture. The rationale behind this approach was to raise output, wages and employment in agriculture. It also received strength from the exponents of the land-augmenting and labour absorption theory of output - raising technological change in agriculture. It was believed that new technologies would not increase crop yield potentials and output but also lead

to growth in the demand for labour and wages in agriculture leading to decline in the incidence of rural poverty.

In view of this idea, the relationships between output growth, wages and employment are examined in the context of U.P.'s agriculture on the basis of the following assumptions:

(a) output growth which is a function of crop yield per hectare, depends on the introduction and adoption of new farm technologies (i.e., technological change); and, (b) wages and employment also depend on output-raising technological change in agriculture. In other words, the components of technological change determining crop yield per unit of land also determine wages and employment in agriculture. Hence the following variables are specified in order to examine the relationships between wages and employment in the context of output-raising technological change:

1. Cropping intensity (x_2)
2. Proportion of cropped area irrigated (x_3)
3. Value of output per acre (x_4)
4. Value of productive assets per acre (x_5)
5. Value of fertilizer consumption per acre (x_6)
6. Money wage rate (x_7)
7. Labour employment in terms of mandays per acre (x_8)
8. Hired labour employment in terms of man days per acre (x_9)
9. Proportion of cropped area under HYV (x_{10})
10. Value of output per unit of labour employment (x_{11})
11. Value of output per unit of hired labour employment (x_{12})

Four sets of multiple regression model are used on the basis of data relating to five districts of the state, i.e., Nainital, Muzaffarnagar, Gorakhpur, Rae Bareli and Hamirpur. The total number of farm households involved in the study are 188 in Nainital, 125 in Muzaffarnagar, 197 in Rae Bareli, 176 in Gorakhpur and 172 in Hamirpur. In the first set, the value of output per acre (x_4) is supposed to be a function of the independent variables such as $x_2, x_3, x_5, x_6, x_8, x_9, x_{10}$ and x_{11} . In the second set, labour employment (inclusive of both, family or self-employed labour) per acre (x_8) is assumed to be a function of $x_2, x_3, x_4, x_5, x_6, x_7, x_{10}$ and x_{12} . In the third set, hired labour employment in terms of man days per acre is taken to be a function of $x_2, x_3, x_4, x_5, x_6, x_7, x_{10}$ and x_{12} . In the fourth set, wage rate (x_7) is taken to be a function of $x_2, x_3, x_4, x_5, x_6, x_9, x_{10}$ and x_{12} . In this way, the sets of multiple regression are as follows:

- (a) $x_4 = A + b_2 x_2 + b_3 x_3 + b_5 x_5 + b_6 x_6 + b_8 x_8 + b_9 x_9 + b_{10} x_{10} + b_{11} x_{11}$;
- (b) $x_8 = A + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_9 x_9 + b_{10} x_{10} + b_{11} x_{11}$;
- (c) $x_9 = A + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_7 x_7 + b_{10} x_{10} + b_{12} x_{12}$; and
- (d) $x_7 = A + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_9 x_9 + b_{10} x_{10} + b_{12} x_{12}$.

In these sets of regression model, constant A (intercept) and b-values are to be estimated. The model is used to analyse the relationships between output growth, wages and employment in the context of technological change in U.P.'s agriculture.

Before analysing the regression results, let us see variations in the levels of technological change, productivity

per acre, wage rate and employment of labour (both self-employed and hired labour per acre across the different farm-size households in these five districts of the state. In all the districts the inter-farm variation in the intensity of cropping is in the range of 23 per cent in Nainital to 31 per cent in Gorakhpur and in the extent of irrigated area is in the range of 25 per cent in Muzaffarnagar to 100 per cent in Hamirpur.

There is wide range of variations in the use of hired labour per acre, fertilizer consumption and value of productive assets per acre and in the area under HYV in all these districts. The coefficients of variation with respect to output per acre, wage rate and employment are also high in these districts. These coefficients are quite high across the different farm-size households in the backward district of Hamirpur. Nainital and Muzaffarnagar which are supposed to be agriculturally developed, by and large, also show a high degree of inter-farm inequality in the levels of output per acre, wage rate and employment in agriculture. All such inter-farm variations in the levels of technological change, output per acre, wage rate and employment have some bearing on the final regression results that are estimated.

The four sets of the regression results are presented in Tables (a, b, c & d) relating to four dependent variables, the value of output per acre (x_4), wage rate (x_7),

use of labour per acre (x_8) and use of hired labour per acre (x_9). All these sets of regression results do not present a uniform picture about the relationships of the independent variables with the dependent variables. The relationships of the independent variables with productivity and employment (i.e., labour use per acre which includes both self-employed family labour and hired labour) are statistically significant in all the districts. Their explanatory powers on productivity and employment in terms of R^2 values respectively vary from 0.7134 and 0.7840 in Muzaffarnagar to 0.3802 and 0.3055 in Gorakhpur. This means that the variables mostly showing technological change exert much greater influence on productivity and employment than what is found in other districts. Nainital comes next to Muzaffarnagar in this respect. Surprisingly, in Muzaffarnagar the relationships of the independent variables with wage rate and use of hired labour are the weakest having statistically insignificant level of their association with the latter two dependent variables. More surprisingly, the relationships of the independent variables with hired labour use is statistically significant in Nainital, R^2 value being 0.4876; but that of the independent variables with wage rate is statistically insignificant in the same district, having R^2 value at 0.0486. The rest three districts show the relationships of the independent variables with wage rate and hired labour

40678

use statistically significant. The most relevant question that can be raised, may be in regard to the contradictory results obtained in the context of Nainital and Muzaffarnagar which are generally characterised to be agriculturally developed districts. Why do the technical variables taken together have positive relationships with productivity and employment in general and why do they have no impact on wage rate and hired labour in Muzaffarnagar and no impact only on the wage rate in Nainital, despite having significant relationship with hired labour use ? Why independent variables (i.e., technical) have significant positive impact on wage rate and hired labour use in the districts of Gorakhpur, Rae Bareli and Hamirpur which are generally characterised to be backward? Answers to these questions may be sought in the next section of the paper. At this juncture, it may be said that technological change with its spatial variations does not affect wage rate and use of hired labour in the same way as productivity and use of labour in general are affected.

The regression results present a contradictory picture in the districts, so far the adjusted coefficients of multiple determination R^2 are concerned. These coefficients show significantly positive impact of the independent variables on productivity and employment (in terms of labour use per acre which refers to flow concept) but being

different from one district to another. However, the coefficients of multiple determination R^2 in regard to wage rate and use of hired labour are not only different in different districts but also insignificant in the districts of Nainital and Muzaffarnagar. All this shows that the relationships of technological change with productivity wage rate and employment are not simple due to the operation of other forces at work nor can be simply explained on the basis of the labour absorption model of agricultural growth used in some of the recent studies on the employment wage question in Indian agriculture.

Production Relations in Agriculture

The marginal and small farmers who dominate numerically in U.P.'s agriculture, still depend on off-farm employment for subsistence; having self-employment in their farms apart. The 37th Round NSS data of 1972 show that the marginal farm households constitute about 68 per cent of the total number of households in rural U.P. In this way, more than two-third of them are marginal and small farm households. The same source also indicates that about 63 per cent of the total households are self-employed in agriculture; and about 15 per cent of them are agricultural labour households which depend on wage employment, having only 3 per cent of total owned area. All this shows pre-ponderence of family labour in agriculture. This

situation also presents a picture in which a large part of labour is not free from property in the means of production by which these farmers can realise their labour as a commodity. In the recent years, the number of such farm households has increased substantially. The co-existence of self-employment with off-farm employment relating to the marginal and small farmers in fact characterises the persistence of pre-capitalist production relations in agriculture in which a large number of labourers are not separated from all property in the means of production. Therefore, the labour power is not fully emerged as a commodity, despite the existence of commodity - money relations in agriculture. That is why, Marx is very explicit when he says 'that two very different kinds of commodity - possessors must face to face and into contact; on the one hand, the owners of money, means of production, means of subsistence, who are eager to increase the sum of value they possess, by buying other people's labour-power; on the other hand, free labourers, the sellers of their own labour-power, and therefore the sellers of labour. Free labourers, in the double sense that neither they themselves form part and parcel of the means of production, as in the case of slaves, bondsmen, nor do the means of production belonging to them, as in the case of peasant-proprietors; they are, therefore, free unencumbered by, any means of production of

their own. With this polarisation of the market for commodities, the fundamental conditions of capitalist production are given'.¹² But such a separation of labourers from all means of production which is the fundamental condition of capitalist production or for the emergence of capitalist production relations, does not seem to be fully in reality.

If the case of Uttar Pradesh is considered, the proportion of landless households alone is about 5 per cent of the total rural households and the landless and semi-landless households taken together constitute about 31 per cent of the total rural households. The marginal and small farm households constitute not less than half of the total farm households. This means that a large part of labourers depend not only on self-employment but also on off-farm employment. The proportion of tenants has officially declined considerably as per the latest NSS and Census Reports. However, concealed tenancy is a basic characteristic of land relations in agriculture.

Our study shows that in Rae Bareli and Hamirpur, 13 per cent and 8 per cent of the sample households leased out 7.25 per cent and 17.13 per cent of the total area respectively while 18 per cent and 20 per cent of the sample households belonging to these districts also leased in 10.20 per cent and 15.24 per cent of the total operated

area respectively. The cases of leasing-out and leasing-in were also prevalent in Gorakhpur significantly. All this reflects a situation of pre-capitalist relations in agriculture in which most of these tenants are not only self-employed but also go for off-farm employment.

The prevailing character of production relations will be more revealing when empirical evidences based on the nature of class relations are cited. In order to discuss class relations in production, criterion of family/wage labour or speaking more precisely hired in and hired out labour reference is used for the differentiation of peasantry in the context of five districts as named in the foregoing section. In other words, the Lenin-Mao hierarchy of agrarian class is applied to the set of data collected from the households belonging to the five districts in U.P.

Hence the following hierarchy of agrarian classes is taken into consideration:

- (a) $SE = 0, HI > 0, HO = 0$ Capitalist landlord
- (b) $SE > 0, HI > 0, HO = 0$ Capitalist peasant
- (c) $SE > 0, HI = 0, HO = 0$ Middle peasant
- (d) $SE > 0, HI > 0, HO > 0$ Small peasant
- (e) $SE > 0, HI = 0, HO > 0$ Poor peasant
- (f) $SE = 0, HI = 0, HO = 0$ Landless agricultural labour.

The computation of primary data based on the above criterion as presented in the following table shows somewhat

mixed evidences to the emergence of capitalist relations in agriculture. In the districts of Nainital and Muzaffarnagar, the first two classes are most revealing as 60 per cent and 43 per cent of their respective households fall in these two districts respectively. In the other three districts, the households belonging to the classes of the middle, small and poor peasants numerically dominate.

Table : Proportion of Households in Different Classes

Class Groups	Gorakh- pur	Muzaffa- rnagar	Naini- tal	Hamir- pur	Rae Bareli
Capitalist landlord	6.90	-	16.24	-	0.54
Capitalist peasant	32.45	42.79	44.67	20.11	37.50
Middle peasant	2.66	3.88	28.43	30.17	10.33
Small peasant	25.00	9.44	0.51	31.28	27.72
Poor peasant	23.40	5.00	4.57	11.73	16.30
Agricultural landless labour	9.58	38.89	5.58	6.71	7.61
All	100.00	100.00	100.00	100.00	100.00

The case of Hamirpur is the most notable one because 73 per cent of the total households fell in from the third to fourth class-groups; whereas Nainital and Muzaffarnagar are noteworthy because of the emergence of the so-called capitalist relations in agriculture. However, inter-district picture presents more a case of semi-feudal relations than capitalist relations, despite an emergence of capitalist relations in Nainital and Muzaffarnagar.

The existence of such relation has bearing on the spread of technological change and its relationship with output growth, wages and employment. It becomes clear when the regression results presented in Table (a, b, c & d) are considered vis-a-vis the character of production relations in the five districts of the state. The relationships of technological change with productivity, wage rate and employment as shown in terms of R^2 values more or less become self-explanatory through the character of production relations prevailing in the districts. Take the case of Nainital and Muzaffarnagar where in some capitalist relations have emerged. And so the value of coefficients of multiple determination R^2 with respect to productivity and employment are higher than those obtained in the context of other districts. But the relationships of technological Change with use of hired labour and wage rate are not significant in Muzaffarnagar because of the capitalist peasants who constitute a sizeable portion of the rural households and go for self-employment. Thus the relative strength of self-employment to hired labour might be affecting the wage rate as well as use of hired labour in agriculture. In Nainital, the relationships of technological change with the use of hired labour is significant because there exist capitalist landlords along with capitalist peasants and so the use of hired labour is expected to be more. However, the relationship

with the wage rate is not significant in the district because of the existence of middle peasants who constitute 28 per cent of the total households and of a sizeable proportion of the capitalist peasants who also go for self-employment. As a result, the wage effects seem to have been counter-weighed by these forces in Nainital.

Rural Labour and Poverty

Given inequitable pattern of land distribution and the relations of production in agriculture, there emerge the following agrarian situations : firstly, a major part of the rural households are self-employed in agriculture and about 15 per cent of them depend on wage employment; and secondly, given the privatisation of land ownership with monopolistic control, the relations of production do not present their strong capitalistic character and so the process of technological change does not seem to raise the use of hired labour per acre in agriculture. As a consequence, the incidence of rural poverty that prevails among the landless, semi-landless and marginal farm households, seems to persist in the rural areas of the state, that too in the condition of the non-agricultural sector to absorb them productively.

The 37th round NSS shows that about 63 per cent of the rural households in the state are self-employed in

agriculture and nearly 15 per cent of them fully depend on wage labour in agriculture. The rest of them, i.e., about 23 per cent of the total households depend on the sources other than self-employment in agriculture and wage labour, owning 8 per cent of the total owned area in the state. All this shows a large part of work force dependent on agriculture. But the existence of weak capitalist relations does not present a promising picture about reduction of poverty in rural areas, that too in the context of an inequitable pattern of land distribution with a monopolistic control in rural areas. The prevailing situation, as per the NSS 27th and 38th Round Reports shows that the casual labourers constitute 73 per cent of the total wage labourers, despite the increase in the proportion of total work force as wage labourers from about 22 per cent in 1972-73 to 24.1 per cent in 1982-83 in the rural areas of the state. In other words, an increase in the percentage of wage labourers to total work-force with growth in the casualisation of wage labour poses a some kind of threat to the process of development which is supposed to take care for poverty removal in the rural areas. Given the situation, the increase in the number of landless, semi-landless and marginal farm households in the state is an indicator of the growing poverty in rural areas in the presence of weak capitalist production relations in agriculture coupled with lack of non-agricultural employment opportunities for agricultural labour.

A study¹³ based on the sample households of 252 in Allahabad and 397 in Hamirpur in the reference year of 1982 shows that all the landless households constituting about 33 per cent and 19 per cent of the total sample households belonging to these two districts respectively were living below the poverty line. Similarly all the households owning marginal holdings constituting 35.32 per cent and 15.37 per cent of the total households belonging to Allahabad and Hamirpur districts respectively were below the poverty line. In this way, about 68 per cent of the total households of Allahabad, 34 per cent of the total households of Hamirpur and 47.16 per cent of the total households of both districts combined were estimated to be below the poverty line. From the point of view savings (i.e., income minus expenditure), all the landless, marginal and small farm households were found to have negative savings. Most of them were also found to have been indebted for mostly unproductive purposes. The data collected from them regarding different development programmes launched by the government during last ten years till 1982 did not indicate any significant impact on the improvement of their socio-economic conditions in these two districts of the state. Hence there is no wonder, if the growing number of the rural poor is assumed to co-exist with the growing number of agricultural labourers and poor peasants in the state in the prevailing situation.

Conclusions

The perspective of agrarian reform as a package of land and tenancy reform measures and programmes, introduced till the mid-seventies, has not been in order to realise social ownership of the land and its produce but to privatise it without any sincere efforts to dynamise the capitalist process of farm production. As a result the introduction and spurt of new farm technologies in the absence of weak capitalist relation in production has failed to increase the demand for hired labourer in proportion to output growth in agriculture. Given inequitable pattern of land relations and such production relations, agricultural development has neither raised the rate of labour absorption nor the wage rate. The preponderance of self-employed family labour coupled with casualisation of wage labour in fact presents a situation of lumpen capitalist process of development in agriculture. The existing situation perhaps becomes more aggravating due to non-absorption of agricultural labour productively in both, agricultural and non-agricultural sectors of the economy. As a result the incidence of poverty, specially among the landless, marginal and small farm households is persisting high in the rural areas. Moreover, the preponderance of self-employed family labour in given conditions restricts the demand for wage labour as well as wage rate, despite

output growth resulting from the spurt of new farm technologies. Hence there is need for a fresh thinking and look for the perspectives of land reform policy in the context of the prevailing agrarian situation in the state of Uttar Pradesh in particular and in rural India in general.

Table : Some of Structural Characteristics of Agrarian Change in Uttar Pradesh (Rural)

	1953-54	1961-62	1971-72	1981-82
1. <u>Concentration Ratio</u>				
a) Owned Area	0.6415	0.6407	0.6324	0.6318
b) Operated Area	0.6134	0.6209	0.6618	0.6608
2. Percent of Households leasing-out land	9.78	7.66	10.86	13.69
3. Per cent of Leased-out land to total owned area	5.84	4.14	7.10	4.80
4. Per cent of Households Leasing in Land to total estimated Households	27.20	-	25.01	21.27
5. Per cent of total operated area leased-in	11.38	-	13.72	11.09
6. Per cent of landless Households to total Households	9.36	-	4.60	4.90
7. Per cent of Landless & Semi-Landless Households to total Households	-	30.90	37.19	35.79
8. Per cent of Households with land holding size upto one hectare	50.87	57.47	65.58	67.95
9. Per cent of owned Area by Marginal Holding size Group Households	12.48	12.34	17.49	20.36

Source : NSS Reports of Different Rounds, (8th, 16th, 26th and 37th)

REFERENCE

1. Shrimali, P.D., 'Agrarian Change, Agrarian Tensions and Organisations in U.P.' (Project Report), Department of Economics, Lucknow University, 1981, p.29.
2. Congress Agrarian Enquiry Committee Report, 1936 (United Provinces), Prabhu Publications, Introduction, p.1.
3. Ibid, Introduction, Chapter I, p.1.
4. Ibid, p.i.
5. Shrimali, P.D., Op.cit., p.227-8.
6. Mishra, G.P. and Rao G. Bhaskar, 'Inter-State Disparities in Indian Agriculture', Journal of Social and Economic Studies, Oct - December, 1987.
7. Bhalla, Sheila, 'Trends in Employment in Indian Agriculture, Land and Asset Distribution', Indian Journal of Agricultural Economics, October-December, 1987.
8. _____, 'Exercise in the Analysis of the Structure of Technological Change' in R.T. Tewari and A. Joshi edited book Development and Change in India, Ashish Publishing House, New Delhi, 1988.
9. Mishra, G.P., 'Technological Change and Agricultural Wages in Uttar Pradesh', in Development and Change in India, R.T. Tewari and A. Joshi (ed.), Ashish Publishing House, New Delhi, 1988.
10. Singh, Baljit, 'Next Step in Village India : A Study of Land Reforms and Group Dynamics', Part I, Main Report (Mimeo graph), Lucknow University, 1959, p.72.
11. Singh, Baljit and Mishra, Shridhar, 'A Study of Land Reform in Uttar Pradesh' Oxford Book Company, Calcutta, 1964, p.111.
12. Shrimali, P.D., Op.cit, p.228.
13. Marx, K. Capital, Vol.I, Progress Publishers, MOSCOW, 1965, p.714.
14. Mishra, G.P., 'A Bench Mark Study of Socio-Economic Conditions in Drought Prone Area in Uttar Pradesh (A Draft)', Giri Institute of Development Studies, Lucknow.

Table 2 : Pattern of Land Distribution

Operational holding size group (in acres)	House-holds	Owned area	Leased out area	Leased in area	Area not under cultivation	Sown Area
Muzaffarnagar						
0.00	40.60	--	--	--	--	--
2.50	27.41	10.00	1.21	--	--	10.18
5.00	13.19	17.96	--	1.25	--	17.67
7.50	11.16	26.01	--	--	--	26.89
10.00	3.04	10.69	--	--	--	10.87
10.00	4.60	33.06	--	--	--	34.39
All	100.00	100.00	0.11	0.21	--	100.00
Hamirpur						
0.00	0.42	--	--	--	--	--
2.50	14.13	3.57	40.07	20.08	9.00	2.92
6.00	27.75	14.22	7.50	13.55	4.37	13.88
7.50	10.84	16.76	--	27.15	--	16.85
10.00	8.40	7.11	--	27.02	7.49	11.30
10.00	21.46	58.34	6.99	9.27	2.13	55.05
All	100.00	100.00	17.13	16.29	2.72	100.00
Nainital						
0.00	3.03	--	--	--	--	--
2.50	81.72	3.78	0.16	6.90	0.09	3.68
5.00	17.68	9.31	0.00	--	--	10.25
7.50	23.23	21.70	1.14	--	0.04	21.90
10.00	11.11	15.66	--	9.70	--	13.20
10.00	21.21	49.55	--	--	--	50.97
All	100.00	100.00	2.13	0.07	0.13	100.00
Gorakhpur						
0.00	9.28	--	--	--	--	--
2.50	62.89	24.52	3.34	20.86	0.19	20.90
5.00	19.97	27.09	6.09	5.30	--	26.10
7.50	1.64	11.14	1.26	--	--	11.12
10.00	2.06	6.56	17.86	15.15	--	7.29
10.00	2.06	30.69	2.30	2.30	--	26.59
All	100.00	100.00	3.41	0.80	0.04	100.00
Rae Bareli						
0.00	6.63	--	--	--	--	--
2.50	59.11	38.40	4.40	20.00	7.40	32.93
5.00	24.31	29.69	16.30	3.30	15.65	35.99
7.50	6.20	17.35	4.03	2.00	7.25	18.17
10.00	2.76	9.59	--	30.00	4.00	7.97
10.00	0.99	4.97	--	--	7.24	4.94
All	100.00	100.00	7.25	10.20	9.35	100.00

Table 3 : Coefficient of Concentration of Land with Households

Sl. No.	Districts	Concentration Ratio	
		Owned Area	Sown Area
1.	Nainital	0.436	0.434
2.	Muzaffarnagar	0.7044	0.7117
3.	Rae Bareli	0.4124	0.4085
4.	Gorakhpur	0.5851	0.5372
5.	Hamirpur	0.5105	0.5099

Table 3(a) : Pattern of Tenancy

(In per cent)

Sl. No.	Districts	Households that			
		Leased-out Land		Leased-in Land	
		H	H	H	H
1.	Nainital	1.00	2.13	6.00	0.87
2.	Muzaffarnagar	1.50	0.13	0.50	0.21
3.	Rae Bareli	13.00	7.25	18.00	10.20
4.	Gorakhpur	3.00	3.41	20.00	8.00
5.	Hamirpur	8.00	17.13	20.00	15.29

Table - 4 : Inter-Farm Disparities in Growth and Development in Five Districts of U.P.

Sl. No.	Variables	Coefficient of variation in (P.C.)				
		Naini- tal	Muzaffar- Nagar	Rae- Bareli	Gorakh- pur	Hamir pur
01.	Value of output (x ₄) per acre	56	118	56	72	128
02.	Employment per acre (in Man days)	129	125	88	132	87
03.	Wage Rate (x ₇)	449	111	108	107	624
04.	Cropping intensity(x ₂)	23	27	31	31	26
05.	P.c. of cropped Area irrigated	(x ₃) 96	25	44	57	100
06.	Value of productive Assets per Acre	(x ₅) 49	155	215	239	178
07.	Value of Fertilizer(x ₆) consumption Per acre	129	98	137	122	195
08.	Hired about per Acre (in Man days)	(x ₉) 291	223	148	218	376
09.	P.c. of cropped area under HYV	(x ₁₀) 427	151	79	351	340
10.	Value of output per unit of labour Employment	(x ₁₁) 158	114	114	184	332
11.	Value of output per unit of hired labour employment (x ₁₂)	56	120	199	380	376

Table-5 (a) : Expression Results Involving Productive Per Acre
(in Rs.) as a Dependent Variable

District	Equation	Con- stant	x_2	x_3	x_5	x_6	x_8	x_9	x_{10}	x_{11}	R^2	F Stat.
1. Nainital	x_4 with $x_2, x_3, x_5, (1.00)$	$4.888^* - 0.239$	1.933^*	0.212^{**}	1.428^*	0.280^*	1.434^*	-0.032	6.423^*	$.437$	17.157^*	
	$x_2, x_3, x_5, (0.615)$	(0.664)	(0.010)	(0.010)	(0.397)	(0.129)	(0.510)	(0.045)	(2.866)			
2. Duzaffar-	-Do-	9.787^*	1.214	$-11.726^* - 0.232$	0.090^*	0.479	0.0814	0.480	1.259	0.713	33.610^*	
	nagar	(4.757)	(2.348)	(4.509)	(0.083)	(0.614)	(0.440)	(0.702)	(1.106)	(13.242)		
3. Gorakh-	-Do-	$2.019^{**} - 0.204$	1.910^*	0.0356	1.916^*	0.594^*	-0.370	-0.006	2.339^{**}	0.806	8.801^*	
	pur	(0.950)	(0.639)	(0.683)	(0.662)	(0.267)	(0.132)	(0.272)	(0.077)	(1.277)		
4. Rae-	-Do-	0.353	-0.0332	$1.578^* - 0.904$	2.104^*	0.708^*	0.910^*	$0.731^* * 22.204^*$	0.410	13.219^*		
	Bareli	(0.770)	(0.416)	(0.553)	(9.072)	(0.612)	(0.143)	(0.523)	(0.316)	(3.561)		
5. Hamir-	-Do-	0.150	0.995	0.026	-0.512	-0.649	4.656^*	-4.514^{**}	-0.023	20.347^*	0.331	7.914^*
	pur	(2.572)	(2.536)	(2.00)	(0.468)	(1.206)	(1.257)	(2.209)	(0.254)	(2.717)		

Notes : * Refers to level of significance at 1%

** Refers to level of significance at 5%

*** Refers to level of significance at 10%

Figures in brackets refer to standard errors.

Table - 5 (b) : Regression Results Involving Labour Employment (in Man days)
Per Acre as a Dependent Variable

District	Equation	Con- stant	x_2	x_3	x_4	x_5	x_6	x_9	x_{10}	x_{11}	R^2	F Stat.
1. Naini- ta.	x_8 with x_2 , x_3, x_4, x_5, x_6 , x_9, x_{10}, x_{11}	0.444 (0.671)	0.494 (0.352)	-0.591 (0.389)	0.093** (0.043)	0.043* (0.005)	0.276 (0.235)	0.622** (0.296)	0.156* (0.023)	-5.156* (-1.157)	0.560	20.102*
2. Muzaffar- nagar	-Do-	0.383 (1.032)	0.864* (0.495)	-0.632 (0.991)	-0.022 (0.020)	0.088 (0.018)	0.986* (0.189)	1.234* (0.092)	0.047 (0.236)	-17.493* (3.515)	0.784	49.008*
3. Gorakh- pur	-Do-	0.166 (0.543)	0.445 (0.359)	-0.019 (0.394)	0.149* (0.042)	-0.044 (0.035)	-0.057 (0.157)	0.778* (0.142)	0.016 (0.043)	-2.318* (0.704)	0.380	12.278*
4. Rae- Bareli	-Do-	0.373 (0.398)	0.445** (0.213)	0.006 (0.294)	0.190 (0.038)	0.094* (0.036)	0.202 (0.0329)	-2.537** (0.296)	0.070 (0.167)	-11.001* (1.865)	0.398	13.048*
5. Hamir- pur	-Do-	0.498*-1.050 (0.179)	0.103 (0.170)	0.021* (0.134)	0.087* (0.006)	0.319* (0.030)	0.803* (0.076)	0.012 (0.132)	-0.853* (0.017)	0.456 (0.294)	13.433*	

Figures in brackets refer to standard errors.

Note : * refers to level of significance at 1%

** refers to level of significance at 5%

*** refers to level of significance at 10%

Table - 5(c) : Regression Results Involving Wage Rate as a Dependent Variable

District	Equation	Con-	stant	x_2	x_3	x_4	x_5	x_6	x_9	x_{10}	x_{12}	R^2	F Stat.
1. Naini- tal	x_7 with x_2 ,	0.012 (0.041)	0.002 (0.022)	0.037*** (0.024)	-0.003 (0.003)	-0.000 (0.000)	0.012 (0.014)	0.016 (0.018)	-0.000 (0.001)	0.000 (0.001)	0.005*** (0.003)	0.049 (0.001)	1.132
	x_3, x_4, x_5, x_6 ,												
	x_9, x_{10}, x_{12}												
2. Muzaffar-	-Do-	0.134** (0.037)	-0.016 (0.018)	-0.054 (0.036)	-0.001** (0.000)	-0.000 (0.006)	0.011 (0.003)	0.004 (0.009)	-0.002 (0.015)	0.028*** (0.015)	0.106 (0.015)	1.603	
3. Gorakh-	-Do-	0.007 (0.003)	0.003** (0.002)	0.003 (0.002)	-0.000 (0.000)	-0.000 (0.001)	0.004 (0.001)	0.005* (0.001)	0.000 (0.000)	0.002 (0.001)	0.345 (0.001)	10.532*	
4. Hamir-	-Do-	-0.051 (0.081)	0.042 (0.076)	0.017 (0.058)	-0.000 (0.002)	-0.000 (0.002)	0.006 (0.012)	-0.020 (0.033)	0.302* (0.058)	0.000 (0.007)	0.26*	0.212 (0.009)	4.294*
4. Rae	-Do-	0.006** (0.003)	0.001 (0.002)	-0.004 (0.002)	-0.000 (0.000)	0.000 (0.003)	0.009* (0.003)	0.030* (0.002)	-0.001 (0.001)	0.004* (0.001)	0.609 (0.001)	30.750	
Bareli													

Figures in brackets refer to standard errors.

Notes : * refers to level of significance at 1%

** refers to level of significance at 5%

*** refers to level of significance at 10%

Table 5 (d) : Regression Results Involving Use of Hired Labour
Per Acres as a Dependent Variable

District	Equation	Constant	x_2	x_3	x_4	x_5	x_6	x_7	x_{10}	x_{12}	R^2	F Stat
1. Nainital	x_9 with x_2 , $x_3, x_4, x_5, x_6,$ x_7, x_{10}, x_{12}	-0.296*** (0.170)	0.020 (0.090)	-0.069 (0.099)	0.0316* (0.010)	-0.002* (0.001)	0.440* (0.050)	0.268 (0.311)	-0.000 (0.006)	-0.017 (0.012)	0.488	21.062
2. Muzaffarnagar	-Do-	0.370 (1.176)	-0.036 (0.537)	0.301 (1.079)	-0.033 (0.022)	0.010 (0.019)	0.401** (0.205)	3.446 (2.840)	-0.017 (0.254)	-0.758*** (0.443)	0.085	1.254
3. Gorakhpur	-Do-	-0.064 (0.248)	-0.087 (0.176)	-0.095 (0.201)	0.006 (0.021)	0.011 (0.018)	0.351** (0.075)	38.546* (6.286)	0.005 (0.022)	0.164 (0.132)	0.367	11.607
4. Rae Bareli	-Do-	-0.073 (0.067)	0.005 (0.039)	0.059 (0.053)	0.011*** (0.007)	-0.008 (0.007)	-0.024 (0.062)	17.184* (1.309)	0.009 (0.030)	-0.129* (0.033)	0.585	27.804
5. Hamirpur	-Do-	0.154 (0.112)	-0.028 (0.112)	-0.054 (0.106)	-0.003 (0.081)	-0.022 (0.003)	0.030 (0.019)	0.581* (0.046)	-0.002 (0.111)	-0.023*** (0.010)	0.195 (0.013)	3.871

Figures in brackets refer to standard errors.

Notes : * refers to level of significance at 1%
** refers to level of significance at 5%
*** refers to level of significance at 10%